

What Is Claimed Is:

1 1. A receiver for simultaneously processing
2 multiple channels in a broadcast band, said receiver
3 comprising:

4 at least one antenna for receiving analog RF
5 signals;

6 a plurality of tunable bandpass filters, each
7 filter for filtering said analog RF signals, each
8 bandpass filter for tuning to a desired frequency;

9 a summer for summing said multiple desired
10 signals into one summed signal;

11 a digitizer for digitizing said summed signal;
12 and

13 a digital tuner capable of simultaneously
14 processing multiple desired signals from said
15 digitized signal.

1 2. The receiver of claim 1 wherein at least two
2 tunable bandpass filters in said plurality of tunable
3 bandpass filters are tuned to the same desired
4 frequency and combine to draw maximum power for
5 reception of said desired frequency.

1 3. The receiver of claim 1 wherein at least one
2 tunable bandpass filter in said plurality of tunable
3 bandpass filters is tuned to a first frequency and
4 another of said tunable bandpass filters in said
5 plurality of tunable bandpass filters is tuned to a
6 second desired frequency that is different than said
7 first desired frequency for simultaneous reception of
8 at least two different frequencies.

1 4. The receiver of claim 1 further comprising
2 an automatic gain controller and an amplifier at the
3 respective output of each of said plurality of
4 bandpass filters.

1 5. The receiver as claimed in claim 4 further
2 comprising at least one tunable bandpass filter in
3 said plurality of said tunable bandpass filters being
4 tuned to a first desired frequency and another of said
5 tunable bandpass filters in said plurality of said
6 tunable bandpass filters being tuned to a second
7 undesired frequency; and

8 wherein said automatic gain controller and
9 amplifier at said output of said tunable bandpass
10 filters that is tuned to said undesired frequency is
11 set at a minimum gain for absorbing said undesired
12 frequency and providing additional receiving power for
13 said first desired frequency.

1 6. A method for reception of multiple channels
2 on a single broadcast band, said method comprising the
3 steps of:

4 receiving a multi-frequency analog RF signal;
5 filtering said multi-frequency analog RF signals
6 into a predetermined number of desired analog
7 frequencies;

8 combining said predetermined number of analog
9 frequencies into a single combined analog signal;
10 digitizing said single combined analog signal;
11 and

12 simultaneously selecting a plurality of desired
13 signals having different frequencies from a digital
14 tuner that receives said digitized combined signal.

1 7. The method as claimed in claim 6 wherein
2 said step of filtering further comprises filtering
3 said multi-frequency analog RF signals into a
4 predetermined number of desired analog frequencies
5 through a plurality of independently tunable bandpass
6 filters.

1 8. A method for rejecting an undesired
2 frequency signal in a single broadcast band while
3 improving reception of a desired frequency signal in
4 the broadcast band, said method comprising the steps
5 of:
6 receiving a desired signal from the broadcast
7 band;
8 filtering said desired signal through a first
9 tunable bandpass filter;
10 receiving an undesired signal from the broadcast
11 band;
12 filtering said undesired signal through a second
13 tunable bandpass filter;
14 adjusting an automatic gain control for said
15 second tunable bandpass filter to a minimum gain
16 thereby absorbing said undesired signal; and
17 digitizing said desired signal.